



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-009
Client Sample ID: T2/MB-10-(0-6")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.3	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	0.76	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	44.2	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	0.77	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	4.0	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
Nitrate as N, Saturated Paste	12.1	mg/L		1.1		ASA10-3	10/27/04 09:57 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	3.24	meq/l		0.05		SW6010B	10/22/04 11:29 / jdh
Magnesium, Saturated Paste	2.79	meq/l		0.08		SW6010B	10/22/04 11:29 / jdh
Sodium, Saturated Paste	1.34	meq/l		0.04		SW6010B	10/22/04 11:29 / jdh
Sulfate, Saturated Paste	2.16	meq/l		0.002		SW6010B	10/22/04 11:29 / jdh
PHYSICAL CHARACTERISTICS							
Sand	28	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	42	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	30	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	CL	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	ND	mg/kg		1.0		A4500-F C	11/17/04 13:00 / jdh
Potassium, NH4OAc Extractable	436	mg/kg		1		ASA13-3	11/17/04 13:00 / jdh
Organic Matter	1.50	%		0.02		ASA29-3	11/18/04 14:57 / jdh
Cation Exchange Capacity	33.0	meq/100g		0.09		SW6010B	10/20/04 06:55 / jdh
Lime as CaCO3	1.6	%		0.1		USDA23c	11/18/04 14:57 / jdh
Phosphorus	8.0	mg/kg		0.4		ASA24-5	11/19/04 02:38 / rp
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.68	meq/100g		0.04		SW6010B	10/20/04 12:01 / jdh
EXCHANGEABLES							
Exchangeable Sodium	0.6	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	1.9	%		0.1		USDA20a	11/18/04 14:57 / jdh
METALS, DTPA EXTRACTABLE							
Zinc	0.26	mg/kg		0.02		SW6010B	10/21/04 09:47 / jdh
METALS, CACL2 EXTRACTABLE							
Barium	8.1	mg/L		0.04		SW6010B	10/21/04 10:20 / jdh

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-009
Client Sample ID: T2/MB-10-(0-6")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, CACL2 EXTRACTABLE							
Boron	1.9	mg/L		0.04		SW6010B	10/21/04 10:20 / jdh
Selenium	ND	mg/L		0.10		SW6010B	10/21/04 10:20 / jdh

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-010
Client Sample ID: T2/MB-10-(6-12")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.5	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	0.77	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	46.3	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	0.95	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	3.6	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
Nitrate as N, Saturated Paste	10.5	mg/L		1.1		ASA10-3	10/27/04 09:59 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	3.26	meq/l		0.05		SW6010B	10/22/04 11:32 / jdh
Magnesium, Saturated Paste	3.42	meq/l		0.08		SW6010B	10/22/04 11:32 / jdh
Sodium, Saturated Paste	1.73	meq/l		0.04		SW6010B	10/22/04 11:32 / jdh
Sulfate, Saturated Paste	3.19	meq/l		0.002		SW6010B	10/22/04 11:32 / jdh
PHYSICAL CHARACTERISTICS							
Sand	22	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	45	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	33	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	CL	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	31.8	meq/100g		0.09		SW6010B	10/20/04 06:58 / jdh
Lime as CaCO3	5.8	%		0.1		USDA23c	11/18/04 14:57 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.85	meq/100g		0.04		SW6010B	10/20/04 12:04 / jdh
EXCHANGEABLES							
Exchangeable Sodium	0.8	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	2.4	%		0.1		USDA20a	11/18/04 14:57 / jdh

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-011
Client Sample ID: T2/MB-10-(12-24")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.7	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	0.73	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	48.4	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	1.7	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	3.2	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
Nitrate as N, Saturated Paste	5.0	mg/L		0.6		ASA10-3	10/27/04 10:03 / cwh
SATURATED PASTE							
Calcium, Saturated Paste	2.16	meq/l		0.05		SW6010B	10/22/04 11:44 / jdh
Magnesium, Saturated Paste	2.78	meq/l		0.08		SW6010B	10/22/04 11:44 / jdh
Sodium, Saturated Paste	2.72	meq/l		0.04		SW6010B	10/22/04 11:44 / jdh
Sulfate, Saturated Paste	3.85	meq/l		0.002		SW6010B	10/22/04 11:44 / jdh
PHYSICAL CHARACTERISTICS							
Sand	22	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	42	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	36	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	CL	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	31.9	meq/100g		0.09		SW6010B	10/20/04 07:03 / jdh
Lime as CaCO3	10.3	%		0.1		USDA23c	11/18/04 14:57 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.07	meq/100g		0.04		SW6010B	10/20/04 12:16 / jdh
EXCHANGEABLES							
Exchangeable Sodium	0.9	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	3.0	%		0.1		USDA20a	11/18/04 14:57 / jdh

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-012
Client Sample ID: T2/MB-10-(24-36")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.7	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	2.51	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	43.5	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	2.8	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	2.4	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	6.37	meq/l		0.05		SW6010B	10/22/04 11:47 / jdh
Magnesium, Saturated Paste	10.1	meq/l		0.08		SW6010B	10/22/04 11:47 / jdh
Sodium, Saturated Paste	7.88	meq/l		0.04		SW6010B	10/22/04 11:47 / jdh
PHYSICAL CHARACTERISTICS							
Sand	33	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	41	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	26	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	L	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	27.3	meq/100g		0.09		SW6010B	10/20/04 07:06 / jdh
Lime as CaCO3	10.8	%		0.1		USDA23c	11/18/04 14:57 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.63	meq/100g		0.04		SW6010B	10/20/04 12:19 / jdh
EXCHANGEABLES							
Exchangeable Sodium	1.3	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	4.7	%		0.1		USDA20a	11/18/04 14:57 / jdh

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-013
Client Sample ID: T2/MB-10-(36-60")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.6	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	3.79	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	39.6	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	3.0	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	2.0	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	12.8	meq/l		0.05		SW6010B	10/22/04 11:50 / jdh
Magnesium, Saturated Paste	19.5	meq/l		0.08		SW6010B	10/22/04 11:50 / jdh
Sodium, Saturated Paste	11.9	meq/l		0.04		SW6010B	10/22/04 11:50 / jdh
PHYSICAL CHARACTERISTICS							
Sand	44	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	33	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	23	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	L	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Fluoride	1.1	mg/kg		1.0		A4500-F C	11/17/04 13:00 / jdh
Cation Exchange Capacity	22.6	meq/100g		0.09		SW6010B	10/20/04 07:09 / jdh
Lime as CaCO3	8.3	%		0.1		USDA23c	11/18/04 14:57 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.63	meq/100g		0.04		SW6010B	10/20/04 12:22 / jdh
EXCHANGEABLES							
Exchangeable Sodium	1.2	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	5.1	%		0.1		USDA20a	11/18/04 14:57 / jdh
METALS, CACL2 EXTRACTABLE							
Barium	0.89	mg/L		0.04		SW6010B	10/21/04 10:23 / jdh
Boron	2.0	mg/L		0.04		SW6010B	10/21/04 10:23 / jdh
Selenium	ND	mg/L		0.10		SW6010B	10/21/04 10:23 / jdh

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-014
Client Sample ID: T2/MB-10-(60-96")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.6	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	4.58	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	42.5	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	1.4	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	23.1	meq/l		0.05		SW6010B	10/22/04 11:53 / jdh
Magnesium, Saturated Paste	24.5	meq/l		0.08		SW6010B	10/22/04 11:53 / jdh
Sodium, Saturated Paste	10.9	meq/l		0.04		SW6010B	10/22/04 11:53 / jdh
PHYSICAL CHARACTERISTICS							
Sand	38	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	37	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	25	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	L	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	27.7	meq/100g		0.09		SW6010B	10/20/04 07:18 / jdh
Lime as CaCO3	6.9	%		0.1		USDA23c	11/18/04 14:57 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	1.63	meq/100g		0.04		SW6010B	10/20/04 12:25 / jdh
EXCHANGEABLES							
Exchangeable Sodium	1.2	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	4.2	%		0.1		USDA20a	11/18/04 14:57 / jdh

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: AMPP
Project: Tongue River Monitoring Tier 2
Lab ID: H04100101-015
Client Sample ID: T2/MB-10-(0-2")

Report Date: 11/21/04
Collection Date: 10/11/04 17:00
Date Received: 10/13/04
Matrix: Soil

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
SATURATED PASTE							
pH, sat. paste	7.4	s.u.		0.1		ASAM10-3.2	11/18/04 14:57 / jdh
Conductivity, Paste Extract	0.53	mmhos/cm		0.01		ASAM10-3	11/18/04 14:57 / jdh
Saturation	38.4	%		0.1		USDA27a	11/18/04 14:57 / jdh
Sodium Adsorption Ratio (SAR)	0.69	unitless		0.01		Calculation	11/18/04 14:57 / jdh
Alkalinity, Saturated Paste	5.0	meq/L		1.0		ASA10-3	11/17/04 13:00 / jdh
SATURATED PASTE							
Calcium, Saturated Paste	2.32	meq/l		0.05		SW6010B	10/22/04 11:56 / jdh
Magnesium, Saturated Paste	1.81	meq/l		0.08		SW6010B	10/22/04 11:56 / jdh
Sodium, Saturated Paste	0.99	meq/l		0.04		SW6010B	10/22/04 11:56 / jdh
PHYSICAL CHARACTERISTICS							
Sand	28	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Silt	47	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Clay	25	%		1.0		ASA15-5	11/18/04 14:57 / jdh
Texture	L	unitless				ASA15-5	11/18/04 14:57 / jdh
CHEMICAL CHARACTERISTICS							
Cation Exchange Capacity	29.5	meq/100g		0.09		SW6010B	10/20/04 07:27 / jdh
Lime as CaCO3	1.5	%		0.1		USDA23c	11/18/04 14:57 / jdh
METALS, AMMONIUM ACETATE EXTRACTABLE							
Sodium, Extractable	0.58	meq/100g		0.04		SW6010B	10/20/04 12:28 / jdh
EXCHANGEABLES							
Exchangeable Sodium	0.5	meq/100g		0.1		Calculation	11/18/04 14:57 / jdh
Exchangeable Sodium Percentage	1.8	%		0.1		USDA20a	11/18/04 14:57 / jdh

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.